Acheson Colloids Company
1600 Washington Avenue
Port Huron, MI 48060
Tel: (810) 984-5581
Fax: (810) 984-1446
www.achesonindustries.com

Electrodag® 550

Easy-Mixing, Stable, Highly Conductive Nickel Coating

PRODUCT DATA SHEET

DESCRIPTION

Electrodag 550 is one of a series of Electrodag coatings designed to achieve **electromagnetic compatibility.**

Electrodag 550 is an **extremely conductive and stable** nickel acrylic lacquer coating that provides excellent long-term shielding protection against radiated EMI. **Electrodag 550** is compatible with plastics commonly used in electronic equipment cabinetry. This product is also overcoatable by decorative top coatings with minimum affect on the shielding/decorative coating properties.

ADVANTAGES

- Easy to mix
- Stable electrical properties post heat cycling and humidity (-40°F/-40°C to 160°F/71°C, 120°F/49°C and 95% RH)
- Burnish resistant (electrical resistance minimally affected by wear)
- Air drying for easy processing
- Easy handling/consistent properties
- UL recognized

TYPICAL PROPERTIES (as supplied)

Pigment	: Nickel
Binder	: Acrylic
Color	: Gray
Solids content by weight	: 58.5%-60.5%
Diluent	: Acheson solvent blend SB-1, SB-8, or SB-10 depending on substrate
Density	: 13.5 lbs/gal (1.62 kg/l)
Theoretical coverage	: 421 sq ft/gal @ 1 mil (6.39 m^2/kg @ 25µm)
VOC	: 5.47 lb/gal (656 g/l)
Viscosity	: 7500 mPa·s (Brookfield #4 @ 20 rpm)

TYPICAL PROPERTIES (as sprayed)

Drying time	: 20 minute flash off then 30 minutes @ 140°-160°F (60°-71°C), or 16 hours air dry
Recommended dry film thickness	: 2.0-2.5 mils (51.0-63.6 µm)

TYPICAL PROPERTIES (when cured)

Resistivity	: 0.9 ohms/sq/mil
Attenuation	: 60-65 dB @ 2 mils per ASTM D4935-99
Maximum service temperature	: 300°F (149°C)

APPLICATION DETAILS

Surface Preparation
Surface should be clean and dry.

Mixing/Blending/Dilution
Thoroughly mix **Electrodag 550** on a paint shaker before thinning. (**Note**: Since **Electrodag 550** is a slow/soft settling material, mixing time when compared to conventional nickel coatings, can be substantially reduced.) For proper dilution, use a ratio of 1:0.8 (product:solvent by volume).

Application
Electrodag 550 should be spray applied using conventional propeller-agitated pressure pot spray systems. Small prototype runs may be sprayed with well-mixed product, using suction cup spray equipment. A nominal 2.0 to 2.5 mil (51.0-63.6 μ) coating thickness is recommended for good shielding performance. However, a thinner coating may be acceptable, depending on the shielding requirements of the device being protected. Avoid dry spray for maximum adhesion and conductivity. During humid days, the addition of no more than 6 fluid ounces per gallon of diacetone alcohol or butyl alcohol to **Electrodag 550** will eliminate blushing. The blushing is characterized by a white tint to the dried surface.

Drying
Electrodag 550 dries to touch in about 5 minutes; to handle in approximately 30 minutes depending on ambient temperature. The product may be force dried beginning with a 20-minute flash-off, then 30 minutes at 140°-160°F (60°-71°C).

Mask Cleaning
For high volume production where masks are often used to prevent coating certain areas, the masks can be cleaned with lacquer thinner or ketone solvents.

STORAGE/SHIPPING HANDLING

Store below 90°F (32°C) Shelf life for this product is 2 years from date of qualification under original seal. Keep from freezing. Keep container tightly closed when not in use. Empty containers may retain hazardous properties. Follow all MSDS/label warnings even after container is emptied.

APPLICATION ASSISTANCE

Acheson's **Application Specialists** are available to assist you in production start-up with **Electrodag 550**. For more information, contact Acheson Colloids Company, (800) 255-1908, or visit our website at www.achesonindustries.com for the Acheson global location nearest you.

HEALTH & SAFETY

Flammable. Harmful if swallowed, inhaled, or absorbed through skin. May cause eye irritation. Wash thoroughly after handling. Keep away from heat, sparks, and open flame. Keep container tightly closed when not in use. Use with adequate ventilation. Avoid breathing vapor. See Acheson's Material Safety Data Sheet for proper first aid instructions.

NOTES:

Electrodag is a registered trade mark of Acheson Industries, Inc.

PRODUCT DATA SHEET